Why build a rain garden at your home?

YOU CAN MAKE A DIFFERENCE!

Every time it rains, water runs off impervious surfaces such as roofs, driveways, roads and parking lots, collecting pollutants along the way.

This runoff has been cited by the United States Environmental Protection Agency (EPA) as a major source of pollution to our nation's waterways.

By building a rain garden at your home, you can reduce the amount of pollutants that leave your yard and enter nearby lakes, streams and ponds.

As more rain gardens are installed, the amount of pollutants that reach the Susquehanna and Chenango Rivers will be lessened. We can all play a role in preserving the health of our waterways!

STORM WATER

A garden is a grand teacher. It teaches patience and careful watchfulness; it teaches industry and thrift; above all it teaches entire trust.

Gertrude Jekyll

References and Additional Resources

- http://toddhaimanlandscapedesign.com/blog//7-solutions-to-draiange-problems-in-the-garden
- https://www.epa.gov/sites/production/files/2015-02/documents/gi_brochure_508_compliant.pdf
- http://www.nyflora.org/files/8913/6672/0378/2011_-_Vol._22_2.pdf
- http://nemo.uconn.edu/publications/rain_garden_broch.pdf
- http://www.grownyc.org/openspace/green-infrastructure-toolkit/green-roofs-and-rain-gardens
- http://www.esf.edu/ere/endreny/GICalculator/RainGardenIntro.html
- http://www.binghamton-ny.gov/ordinance/erosion-control
- http://www.binghamton-ny.gov/illicit-discharge-detection-and-elimination
- http://www.binghamton-ny.gov/departments/planning-housing-community-development/planning-housing-community-development
- http://www.binghamton-ny.gov/stormwater-management
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City of Binghamton

Informational Brochure

RAIN GARDENS

BIO RETENTION

APRIL SHOWERS BRING MAY FLOWERS

RAIN GARDEN PLANTINGS PHOTO: VERMONT WILDFLOWER FARM

What is a Rain Garden?

Rain garden, also known as bioretention or bio-infiltration pond.

Rain Gardens are a shallow, constructed depression that is planted with deep-rooted native plants & grasses. That collects runoff from a roof, driveway or yard and allows it to infiltrate into the ground.

Rain gardens are designed to temporarily hold and soak in rain water runoff that flows from roofs, driveways, patios or lawns. The rain garden is dry most of the time and typically holds water only for the day following a rainfall event.

Some people distinguish a difference between a "rain garden" and a "bio-retention pond". This difference is that a bio-retention pond usually have some sort of engineered overflow structure such as a weir or drain pipe.

Benefits

- **Runoff Volumes** — Reduce the amount of pollutants that wash into lakes, streams, ponds and wetlands.
- **Pollutant Removal** - vegetated soils remove more stormwater pollutants than non-vegetated soils through processes of absorption, filtration, sedimentation, infiltration, phytoremediation, volatilization, surface resistance and thermal attenuation.
- **Groundwater Recharge** — Help protect communities from flooding and drainage problems.
- **Heat Pollution** — Help sustain adequate stream flow during dry spells through infiltration and recharge.
- **Aesthetics** — Enhance the beauty of your yard and the neighborhood.
- Costs — Reduce the need for costly municipal stormwater treatment structures.

The City of Binghamton offers two grant opportunities to Binghamton residents and business owners interested in implementing green infrastructure projects:

- 50/50 Stormwater Management Fund
- Green Stormwater & Landscaping Matching Fund

Limitations

- Size — Rain garden areas of about 10-20% of the upstream impervious area. An optimum rain garden size is about 538 square feet, draining 2,691 square feet of impervious area. When used to treat larger areas, they can clog.
- Siting — Smaller, distributed rain gardens are better than single large scale facilities.
- Rain gardens cannot be placed over utility crossings unless trench dams are installed.
- Slopes — Rain gardens are best used on relatively shallow slopes (approximately 5%).